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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,472	09/15/2003	Sang Seok Lee	8733.870.00-US	9241

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EXAMINER

KOCH, GEORGE R

ART UNIT      PAPER NUMBER

1734

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

<b>Application No.</b> 10/661,472	<b>Applicant(s)</b> LEE ET AL.	
<b>Examiner</b> George R. Koch III	<b>Art Unit</b> 1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 16 May 2006.
- 2a)  This action is **FINAL**.
- 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-15, 17-44, 46-74, 76-97 and 100-121 is/are pending in the application.  
4a) Of the above claim(s) 34, 40, 64, 70, 87, 93, 100, 106 and 111-113 is/are withdrawn from consideration.
- 5)  Claim(s) 1-15, 17-33, 35-39, 41-44, 46-63, 65-69, 71-74, 76-86, 88-92, 94-97, 101-105 and 107-110 is/are allowed.
- 6)  Claim(s) 119-121 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All   b)  Some \*   c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/3/06.
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/16/2006 has been entered.

### ***Claim Rejections - 35 USC § 102***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 119 is rejected under 35 U.S.C. 102(b) as being anticipated by Satoshi (the JPO database machine translation of JP 2001-356353)

As to claim 119, which is identical to originally filed claim 1, Satoshi discloses a substrate bonding device for fabricating a liquid crystal display (LCD) panel, comprising a base frame (stand 2 and frame 3), a lower chamber unit (bottom chamber 10) mounted to the base frame, wherein the lower chamber unit defines a lower interior space and includes an upper surface, an upper chamber unit (top chamber 21) arranged over the lower chamber unit, wherein the upper chamber unit defines an upper

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interior space, includes a lower surface, and is joinable to the lower chamber unit (described in paragraph 0033), chamber moving means for raising and lowering the upper chamber unit (the movement is described in paragraphs 0015 and the means are items 29 and 30), an upper stage (item 28) within the upper interior space for securing a first substrate, a lower stage (item 9) within the lower interior space for securing a second substrate, alignment cameras (image recognition camera, and see paragraph 0037) provided to at least one of the upper and lower chamber units capable of and for verifying an alignment state of a plurality alignment marks formed on the first and second substrates, and alignment means (shown in Figure 2) arranged at side portions of the lower chamber unit for adjusting an alignment between the first and second substrates.

The location of the alignment means as worded in the claims (at side portions of the lower chamber unit) is considered broad enough read on Satoshi.

Satoshi discloses that the lower chamber is rectangular (see figure 2, which shows that the bottom is rectangular). Therefore, Satoshi discloses that the lower chamber unit includes a first pair of opposing sides and a second pair of opposing sides, wherein a length of the first pair of opposing sides is greater than a length of the second pair of opposing sides.

#### ***Claim Rejections - 35 USC § 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 120 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoshi (the JPO database machine translation of JP 2001-356353) as applied to claim 119 above, and further in view of Hiroki (US Patent 5,306,380).

As to claim 120, identical to originally filed claim 45 from the previous office action, Satoshi discloses the base frame, lower chamber unit, upper chamber unit, chamber moving means, upper stage, lower stage and sealing means (and see rejections of claims 1 and 30 above). Satoshi discloses sealing means (item 44) provided to at least one of the upper and lower surfaces for sealing an interior space surrounding the first and second substrates, wherein the sealed interior space is definable by joined ones of the upper and lower chamber units.

Satoshi discloses that the lower chamber is rectangular (see figure 2, which shows that the bottom is rectangular). Therefore, Satoshi discloses that the lower chamber unit includes a first pair of opposing sides and a second pair of opposing sides, wherein a length of the first pair of opposing sides is greater than a length of the second pair of opposing sides.

Satoshi does not suggest a case surrounding the chamber units.

Hiroki discloses a case (Figure 1) surrounding the chamber units (items 3a, 3b, and 3c). One in the art would immediately recognize that the case provides a secure and clean environment for performing the processes. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized such a case in order to provide a clean and secure environment for the chambers.

6. Claim 121 is rejected under 35 U.S.C. 103(a) as being unpatentable over Satoshi (the JPO database machine translation of JP 2001-356353) as applied to claim 119 above and further in view of Nakagomi (US Patent 5,742,173).

As to claim 121, identical to originally filed claim 75, Satoshi as applied to claim 119 above discloses a bonding device for fabricating LCD devices comprising the base frame, the lower chamber unit, the upper chamber unit, the chamber moving means, the upper stage, and lower stage as claimed (see the rejection of claim 1 above).

Satoshi discloses that the lower chamber is rectangular (see figure 2, which shows that the bottom is rectangular). Therefore, Satoshi discloses that the lower chamber unit includes a first pair of opposing sides and a second pair of opposing sides, wherein a length of the first pair of opposing sides is greater than a length of the second pair of opposing sides.

Satoshi does not suggest spraying means, blowing means, and flow tubes as claimed in claim 75.

Nakagomi discloses spraying means (i.e., the openings, see Figure 23), blowing means (the source) and connecting to gas supply sources (implying connecting tubes), in conjunction with ionizer equipment (see columns 16-17). One in the art would immediately appreciate that such equipment improves the cleanliness of the chamber. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have included spraying means, blowing means, and flow tubes in order to ensure that the chamber is maintained at a sufficient cleanliness.

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7. With respect to claims 119, 120, and 121 above, the examiner's responses (mailed 6/30/2005) to the arguments (made in the remarks filed 3/10/2005) as to the allowability of previous version of claims 1, 45 and 75 from the original claims are maintained.

***Allowable Subject Matter***

8. Claims 1-15, 17-33, 35-39, 41-44, 114, and 115 are allowed.

9. The following is an examiner's statement of reasons for allowance: The prior art of record does not suggest the interlocking means of claim 16 in the context of the limitations of claim 1 (which is anticipated by the Satoshi reference - see the rejection of claim 119 above which has all of the other elements of claim 1).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

10. Claims 46-63, 65-69, 71-74 and 116 are allowed.

11. The following is an examiner's statement of reasons for allowance: The prior art of record does not suggest the transparent materials in the context of claims 46 (which is anticipated by the Satoshi reference - see the rejection of claim 120 above which has all of the other elements of claim 46).

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12. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

13. Claims 79, 76-78, 80-86, 88-92, 94-97 and 117 are allowed.

14. The following is an examiner's statement of reasons for allowance: The prior art of record does not suggest the outwardly sloped, curved regions in the chamber unit in the context of the other limitations of claim 79 (which is anticipated by the Satoshi reference - see the rejection of claim 121 above which has all of the other elements of claim 79).

15. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

16. Claims 103, 101, 102, 104, 105, 107-110 and 118 are allowed.

17. The following is an examiner's statement of reasons for allowance: The prior art of record does not suggest the inclusion of holes in the protection sheet or corresponding those holes with the chuck in the context of the other limitations of claim 103 (these other limitations are anticipated by US 2002/0043344 to Watanabe, which discloses a substrate bonding device for fabricating a LCD device, comprising an upper



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stage (item 59) for securing a first substrate of the LCD device, a lower stage (item 58) for securing a second substrate of the LCD device, first and second reels (items 54 and 55, and see paragraph 0040) arranged at opposite side portions of at least one of the upper and lower stages, a protection sheet (item 51) for covering a surface of at least one stage, wherein the protection sheet is scrollable by the first and second reels, and a rotating part (items 52 and 53) for rotating the first and second reels. Sheet/Belt 51 is considered to substantially cover the surface of the stage.)

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

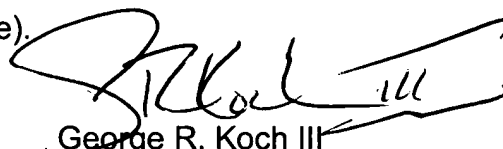
Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (571) 272-1230 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-866-377-8642 and giving the operator the above TDD number. The examiner can also be reached by E-mail at [george.koch@uspto.gov](mailto:george.koch@uspto.gov) <<mailto:george.koch@uspto.gov>> in accordance with MPEP 502.03. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Fiorilla can be reached on (571) 272-1187. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



George R. Koch III  
Primary Examiner  
Art Unit 1734

GRK  
6/11/2006